



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: **2001252563 A**(43) Date of publication of application: **18.09.01**

(51) Int. Cl. **B01J 23/58**  
**B01D 53/94**  
**B01J 23/42**  
**B01J 23/44**  
**B01J 23/46**  
**B01J 23/745**  
**B01J 23/89**  
**F01N 3/08**  
**F01N 3/10**  
**F01N 3/28**

(21) Application number: **2000066417**(71) Applicant: **TOYOTA MOTOR CORP**(22) Date of filing: **10.03.00**(72) Inventor: **HARA NAOYUKI**

(54) **EXHAUST GAS CLEANING CATALYST AND  
 EXHAUST GAS CLEANING DEVICE**

COPYRIGHT: (C)2001,JPO

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To further improve the reduction efficiency and further cut the NOx amount exhausted without being completely reduced in a stoichiometric-to-rich atmosphere of fuel in the high temperature zone.

**SOLUTION:** A CO modification catalyst is arranged at the upstream side of an exhaust gas flow channel and an NOx occlusion/reduction-type catalyst is arranged at the downstream side of the CO modification catalyst. H<sub>2</sub> is formed from CO and H<sub>2</sub>O contained in an exhaust gas in the stoichiometric-to-rich atmosphere of fuel with the help of the CO modification catalyst. The reduction activity of the formed H<sub>2</sub> is extremely higher than that of the HC or CO, so that the reduction efficiency of the NOx by the NOx occlusion/reduction-type catalyst is enhanced.

